

# Missouri Behavioral Risk Factor Surveillance System

## 2014 Key Findings



Missouri Department of Health and Senior Services  
Gail Vasterling, Director

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER  
Services provided on a nondiscriminatory basis.

# ACKNOWLEDGEMENTS

## Missouri Behavioral Risk Factor Surveillance System (BRFSS) 2014 Key Findings

### Special Thanks:

Thank you to more than 7,000 Missouri adults whose telephone numbers were randomly selected for participation in the 2014 BRFSS interview. This valuable information would not be available without their willingness to participate.

### Project Management and Report Preparation:

Missouri Department of Health and Senior Services  
Office of Epidemiology

**Shumei Yun**, MD, MPH, PhD, Team Leader, Chronic Disease and Nutrition  
Epidemiology Team

**Arthur Pashi**, PhD, Research Analyst

**Janet Wilson**, MEd, MPA, BRFSS Coordinator

Phone: (573) 526-6660

Email: Janet.Wilson@health.mo.gov

### Data Collection (Interviews):

University of Missouri-Columbia  
Department of Health Management and Informatics  
Health and Behavioral Risk Research Center

**William T. Wells, Ph.D.**, Director

**Kathy McDougal**, Operations Manager

The U.S. Centers for Disease Control and Prevention (CDC) Division of Behavioral Surveillance provides support to state BRFSS programs through funding, primary data analysis and technical assistance.

Suggested Citation: 2014 Missouri Behavioral Risk Factor Surveillance System Key Findings. Jefferson City, MO: Missouri Department of Health and Senior Services. Office of Epidemiology. August 2015.

# Contents

<b>Introduction</b>	4
<b>Key Findings</b>	
General Health Measures	5
Disability	5
Access to Health Care	5
Health Risk Behaviors	
Cigarette Smoking and Quitting	6
Electronic Cigarette Use	6
Smokeless Tobacco Use	6
Physical Inactivity	7
Falls	7
Heavy and Binge Alcohol Drinking	7
Drinking and Driving	7
Lack of Seatbelt Use	7
Inadequate Sleep	7
Chronic Conditions and Diseases	
Overweight	7
Obesity	7
Arthritis	7
Depressive Disorders	7
Diabetes	8
Current Adult Asthma	8
Chronic Obstructive Pulmonary Disease (COPD)	8
Cancer	8
Heart Attack	8
Coronary Heart Disease	8
Stroke	8
Kidney Disease	8
Childhood Asthma	8
Preventive Practices and Screenings	
Immunizations	8
Oral Health	8
HIV Testing	9
Breast Cancer Screening	9
Cervical Cancer Screening	9
Colorectal Cancer Screening	9
Prostate Cancer Screening	9
Cancer Survivorship	9
Policy and Environmental Change	
Support for Smoke-free Laws	9
	9

# INTRODUCTION

The Missouri Behavioral Risk Factor Surveillance System (BRFSS) is an annual telephone survey of adults age 18 and older that collects a range of information on health issues. BRFSS data are used to identify emerging health problems, establish health objectives and track their progress, and develop and evaluate public health policies and programs.

In 2014, 7,081 adults were interviewed January through December by the Health and Behavioral Risk Research Center at the University of Missouri-Columbia. Randomly selected household landline telephone numbers were called and an adult was randomly selected to participate in the survey. Additionally, randomly selected adult cell telephone users participated in the interview. Data from the landline and cell telephone interviews were aggregated and weighted by the U.S. Centers for Disease Control and Prevention (CDC) to be representative of non-institutionalized adults in Missouri. This report summarizes key findings from the survey.

**Please note:** The CDC began using new weighting methodology in 2011 that allows the data to be more representative of the adult population. A description of the new methodology may be found at <http://www.health.mo.gov/data/brfss/data.php>. Data from 2011 and later should not be compared to data prior to 2011 because of the new weighting method.

The 2014 BRFSS revealed improvements among Missouri adults in the following areas:

- 83.9 percent of adults ages 18-64 had health care coverage, a significant increase from 78.7 percent in 2011
- 92.6 percent of adults ages 55-64 had health care coverage, a significant increase from 86.3 percent in 2011
- 20.6 percent smoked cigarettes, a significant decline from 25.0 percent in 2011
- 76.4 percent supported local laws that make all indoor workplaces smoke-free, a significant increase from 69.4 percent in 2011
- 70.0 percent supported a change in Missouri law that would make all indoor workplaces smoke-free statewide, a significant increase from 64.4 percent in 2011

However, the following health concerns were found among Missouri adults:

- 39.1 percent with annual household incomes of less than \$15,000 smoked cigarettes
- 37.7 percent with annual household incomes of less than \$15,000 had no health care coverage
- 35.4 percent were overweight
- 30.2 percent were obese
- 28.0 percent had been diagnosed with arthritis by a doctor
- 25.0 percent had not engaged in leisure time physical activity during the past 30 days
- 23.2 percent were limited in activities due to physical, mental or emotional problems
- 22.0 percent did not always wear a seat belt
- 21.7 percent had a depressive disorder
- 20.7 percent of males engaged in binge drinking of alcohol (5 or more drinks on one occasion)
- 13.7 percent did not see a doctor when needed in the past 12 months due to cost

In general, a consistent finding from the survey is that adults who have the lowest education levels and annual household incomes compared to those with the highest education and income levels were less healthy, engaged in health risk behaviors to a greater extent, and were less likely to have health care coverage.

# 2014 BRFSS KEY FINDINGS

## **General Health Measures**

Most Missouri adults (83.1 percent) had excellent, very good or good general health while 16.9 percent had fair or poor health. More than one-third (38.9) of adults with an annual household income of less than \$15,000 had fair or poor general health. One-quarter of adults (24.9 percent) experienced poor physical health on three or more of the past 30 days. Twenty-four (23.5) percent had mental health that was not good on three or more of the past 30 days. Thirty-two (32.3) percent were kept from doing their usual activities on three or more of the past 30 days due to poor physical or mental health.

## **Disability**

Twenty-three (23.2) percent of Missouri adults were limited in activities because of physical, mental or emotional problems including 45.9 percent of adults with annual household incomes of less than \$15,000.

Because of physical, mental or emotional problems, 11.6 percent of adults had serious difficulty concentrating, remembering or making decisions, and 7.8 percent had difficulty doing errands alone such as visiting a doctor's office or shopping.

Fourteen (14.2) percent of adults had serious difficulty walking or climbing stairs. Four (4.0) percent of adults had difficulty dressing or bathing. Ten (10.0) percent of adults had a health problem that required them to use special equipment, such as a cane, wheelchair, special bed or special telephone. Five (4.6) percent were blind or had serious difficulty seeing, even when wearing glasses.

## **Access to Health Care**

Among Missouri adults age 18 to 64, 16.1 percent had no health care coverage in 2014, a significant decline from 20.3 percent in 2012 and 21.3 percent in 2011. A significantly greater percentage of African-American adults (23.3 percent) did not have health care coverage compared to white adults (14.2 percent). A significantly greater percentage of adults with annual household incomes less than \$15,000 (37.7 percent) and between \$15,000 and \$24,999 (32.6 percent) had no health care coverage compared to those with incomes of \$25,000-\$34,999 (18.2 percent), \$35,000-\$49,999 (12.7 percent), \$50,000-\$74,999 (7.3 percent), or \$75,000 or greater (3.1 percent).

The percentage of adults with annual household incomes of \$15,000-\$24,999 that had no health care coverage declined significantly from 44.5 percent in 2012 to 32.6 percent in 2014. There were no significant changes among adults with household incomes of less than \$15,000 and \$25,000 and greater during this period. *This is likely due to subsidies provided through the federal Affordable Care Act that made health care coverage affordable for adults with household incomes of \$15,000-\$24,999, but not for those with incomes less than \$15,000 and who did not meet current Medicaid eligibility in Missouri.*

Additionally, there was a significant decline in the percentage of adults ages 55-64 without health care coverage from 13.7 percent in 2011 to 7.4 percent in 2014. There were no significant changes in health care coverage among adults of other age groups during this period.

Among adults who had no health care coverage:

- 33.0 percent last had health care coverage more than 3 years ago
- 23.6 percent last had health care coverage more than 1 year, but not more than 3 years ago

- 28.2 percent last had health care coverage within the past year
- 15.2 percent never had health care coverage

Among adults who had health care coverage:

- 53.0 percent had primary coverage through an employer or union or another person's employer
- 25.3 percent had primary coverage through Medicare
- 10.2 percent had coverage through a personal plan or other family member's plan
- 5.1 percent had primary coverage through Medicaid or another state plan
- 4.7 percent had primary coverage through a military plan, and
- 1.7 percent had coverage through some other source.

Fourteen (13.7) percent of adults needed to see a doctor in the past 12 months but could not because of the cost including 27.9 percent of those with annual household incomes of less than \$15,000 and 25.5 percent of those with incomes of \$15,000-\$24,999.

Nine (8.8) percent of adults did not take medication as prescribed during the past 12 months because of cost. Almost one quarter (23.7 percent) of adults have health care bills that are being paid off over time.

Fourteen (14.1) percent of adults had not been to a doctor, nurse or other health professional in the past 12 months. Eighteen (18.2) percent had been to the doctor one time, 18.8 percent two times, 22.8 percent three or four times, and 26.0 percent five or more times.

Seventy-nine (78.7) percent of adults last had a routine checkup within the past two years, 19.4 percent last had a checkup two or more years ago, and 1.9 percent had never had a checkup.

Sixty (60.3) percent of adults were very satisfied with the health care they received, 31.8 percent were somewhat satisfied, 4.0 percent were not at all satisfied, and 3.9 percent had not received health care.

## **Health Risk Behaviors**

### *Current Cigarette Smoking and Quitting*

Twenty-one (20.6) percent of Missouri adults smoked cigarettes every day or some days, a significant decline from 23.9 percent in 2012 and 25.0 percent in 2011. In 2014, a significantly greater percentage of adults with less than a high school education (37.0 percent) smoked cigarettes than adults with a high school education or GED (24.9 percent), some post high school education (19.4 percent) or a college degree (8.3 percent). More than one-half (53.9 percent) of current smokers stopped smoking for one day or longer in the past 12 months because they were trying to quit. Among adults who had stopped smoking, 9.5 percent last smoked a cigarette within the past 12 months, 15.7 percent one to five years ago, 16.7 percent five to ten years ago and 57.4 percent ten or more years ago.

### *Electronic Cigarette Use*

Twenty-three (23.4) percent of Missouri adults had ever used an electronic cigarette. Seven (7.0) percent used e-cigarettes everyday or some days. Almost one-half (45.7 percent) of those that had tried e-cigarettes did so primarily because they were trying to quit using regular tobacco products. Seventeen (17.1) percent used e-cigarettes primarily to try a new way of smoking, 13.7 used them because friends or family did so, 4.0 percent used them primarily to smoke in places that do not allow regular tobacco products, and 19.6 percent used them for other reasons.

### *Smokeless Tobacco Use*

Smokeless tobacco was used every day or some days by 9.2 percent of Missouri adult males.

### *Physical Inactivity*

Twenty-five (25.0) percent of Missouri adults had not participated in leisure time physical activity or exercise in the past month, a significant decline from 28.3 percent in 2013. A significantly greater percentage of adults with less than a high school education (41.1 percent) and a high school education or GED (31.5 percent) were physically inactive compared to adults with post high school education (20.5 percent) or a college degree (13.9 percent).

### *Falls*

Among Missouri adults age 45 and older, 31.6 percent had fallen one or more times in the past three months. Forty-one (40.9) percent had one or more of the falls result in an injury that caused them to limit their regular activities for at least a day or to go see a doctor.

### *Heavy and Binge Alcohol Drinking*

Five (5.2) percent of Missouri adults were considered heavy drinkers as defined by males having more than two drinks per day and females having more than one drink per day. A significantly greater percentage of males (6.8 percent) than females (3.7 percent) engaged in heavy drinking. A significantly greater percentage of males (20.8 percent) than females (9.8 percent) engaged in binge drinking on at least one occasion during the past month. Binge drinking is defined as having five or more drinks on one occasion for males and four or more drinks for females.

### *Drinking and Driving*

Three (2.9) percent of Missouri adults had driven one or more times after having too much to drink in the past 30 days.

### *Lack of Seatbelt Use*

Twenty-two (22.0) percent of Missouri adults did not always wear a seat belt. Twenty-eight (27.5) percent of males and 16.8 percent of females did not always wear a seat belt.

### *Inadequate Sleep*

One-third (33.2 percent) of Missouri adults slept on average less than seven hours during a 24-hour period. Sixty-three (63.1) percent slept seven to nine hours and 3.7 percent slept more than nine hours on average. A significantly greater percentage of African-American adults (42.3 percent) slept less than seven hours on average than white adults (31.6 percent).

## **Chronic Diseases and Conditions**

The percentage of Missouri adults that had the following chronic conditions or diseases in 2014:

- **Overweight – 35.4 percent**  
A significantly greater percentage of males (41.4 percent) than females (29.2 percent) were overweight.
- **Obesity – 30.3 percent**  
A significantly greater percentage of African-American adults (39.5 percent) were obese than white adults (29.4 percent).
- **Arthritis – 28.0 percent**  
A significantly greater percentage of adults with less than a high school education (39.8 percent) had arthritis than adults with a high school education or GED (30.2 percent), some post high school education (26.5 percent) or a college degree (20.6 percent).
- **Depressive Disorder – 21.7 percent**  
A significantly greater percentage of females (27.8 percent) than males (15.3 percent) had been told by a health professional that they had a depressive disorder. A significantly greater percentage of adults with less than a high school education (31.7 percent) had a depressive disorder than adults with a high school education or GED (20.6 percent), some post high school education (22.6 percent), or a college degree (16.8 percent).

- **Diabetes – 11.1 percent**  
A significantly greater percentage of African-American adults (18.0 percent) had been told by a health professional they had diabetes compared to white adults (10.1 percent). Sixty (60.3) percent of adults had been told they had diabetes after the age of 45. Over half (56.9 percent) of adults had a test for high blood sugar or diabetes within the past 3 years. Nine (8.5) percent of adults had been told by a health professional they had **pre-diabetes**.
- **Asthma (Current) – 9.7 percent**  
A significantly greater percentage of females (12.0 percent) than males (7.3 percent) had asthma.
- **Chronic Obstructive Pulmonary Disease (COPD) – 8.2 percent**  
A significantly greater percentage of adults with less than a high school education (17.4 percent) had been told by a health professional they had COPD than adults with a high school education (10.2 percent), some post high school education (6.1 percent) or a college degree (3.4 percent).
- **Cancer (Other than skin) – 7.2 percent**  
18.0 percent of adults age 65 and older had been diagnosed with a type of cancer other than skin cancer. Six (6.0) percent of adults had been diagnosed with **skin cancer**, including 17.3 percent of adults age 65 and older.
- **Heart Attack – 5.4 percent**  
A significantly greater percentage of males (6.8 percent) than females (4.0 percent) had been told by a health professional they had experienced a heart attack or a myocardial infarction.
- **Coronary Heart Disease – 4.8 percent**  
A significantly greater percentage of males (6.1 percent) than females (3.5) had been told by a health professional that they had coronary heart disease or angina.
- **Stroke – 3.7 percent**  
A significantly greater percentage of adults ages 65 and older (9.6 percent) than adults less than 65 years of age had been told by a health professional they had experienced a stroke.
- **Kidney Disease – 2.4 percent**  
Less than three percent of adults had been told by a health professional they had kidney disease.

### **Childhood Asthma**

Adults with children under the age of 18 were asked to answer questions about a randomly selected child in the household. Responses were weighted to be representative of all children in Missouri under the age of 18. As a result, it was found that 14.9 percent of children under the age of 18 in Missouri had been told by a doctor or other health professional that they had asthma. Among those that had been told they had asthma, 75.6 percent still had the condition.

### **Preventive Practices**

#### *Immunizations*

Forty-three (43.0) percent of adults age 18 and older had the flu vaccine within the past twelve months. Among adults age 65 and older, 68.3 percent had the flu vaccine within the past 12 months. Also among adults age 65 and older, 72.0 percent had ever had a pneumococcal vaccination. Among adults age 45 and older, 20.3 had ever had the shingles or Zoster vaccine (4.7 percent of adults age 45-54; 12.9 percent of ages 55-64; and 34.1 percent of 65 and older).

#### *Oral Health*

Fifty-nine (58.6) percent of Missouri adults visited a dentist within the past 12 months, 11.6 percent had seen a dentist between one and two years ago, 13.1 percent had done so between two and five years ago and 15.8 percent had last seen a dentist five or more years ago. One-third (34.1 percent) of adults with an annual household income of less than \$15,000 had not seen a dentist within the past five years. Forty-seven (46.6) percent of adults had had one or more teeth removed due to decay, gum disease or infection, including 6.8 percent who had all their teeth removed.



### *HIV Testing*

Thirty-one (31.1) percent of adults age 18 and older had ever been tested for HIV. A significantly greater percentage of African-American adults (58.2 percent) than white adults (27.2 percent) had been tested.

### *Breast Cancer Screening*

Eighty-seven (87.2) percent of females age 18 and older had ever had a clinical breast exam. Among those that had had a clinical breast exam, 77.4 percent had the exam within the past two years.

Among females age 40 and older, 68.1 percent had a mammogram within the past two years. A significantly greater percentage of African-American females (77.4) than white females (66.8 percent) had a mammogram within the past two years. A significantly smaller percentage of females age 40 and older with less than a high school education (51.0 percent) had a mammogram within the past two years than females with a high school education (65.0 percent), some post high school education (72.2 percent) or a college degree (76.2 percent).

Among females age 50 and older, 70.5 percent had a mammogram within the past two years.

### *Cervical Cancer Screening*

Among females age 18 and older, 73.6 percent had a pap test within the past three years.

### *Colorectal Cancer Screening*

Among adults age 50 and older, 10.0 percent had a home blood stool test within the past two years. Sixty-seven (66.7) percent of adults age 50 and older had ever had a sigmoidoscopy or colonoscopy exam (46.9 percent of adults age 50-54; 66.6 percent of age 55-64 and 76.5 percent of age 65 and older). Among those that had had one of the exams, 96.7 percent had a colonoscopy as their most recent exam.

### *Prostate Cancer Screening*

Among men age 40 and older, 43.9 percent had a Prostate-Specific Antigen (PSA) test within the past two years, a significant decline from 50.2 percent in 2012.

## **Cancer Survivorship**

Among the adults who had experienced some type of cancer, 85.5 percent had only one type, 12.4 percent had two types and 2.1 percent had three or more types. Six (5.5) percent were currently receiving treatment for cancer, 90.9 percent had completed treatment, 2.8 percent had not started treatment and 0.7 percent had refused treatment. Six (5.5) percent had participated in a clinical trial as part of their cancer treatment. Six (6.3) percent were experiencing physical pain caused by the cancer or cancer treatment. Ninety-five (94.5) percent had health insurance that paid for all or part of their cancer treatment for the most recent diagnosis of cancer. Five (5.4) percent had been denied health insurance or life insurance coverage because of their cancer.

## **Policy and Environmental Change**

### *Support for Smoke-free Laws*

Seventy-six (76.4) percent of Missouri adults would support a local law that would make all indoor workplaces in their community smoke-free, including restaurants, bars and casinos. This is a statistically significant increase from 69.4 percent in 2011 and 72.7 percent in 2012.

Seventy (70.0) percent of adults would support a change in Missouri state law that would make all workplaces smoke-free by prohibiting smoking in all indoor workplaces state-wide, including restaurants, bars and casinos. This is a significant increase from 64.4 percent in 2011, 64.7 percent in 2012 and 65.7 percent in 2013.